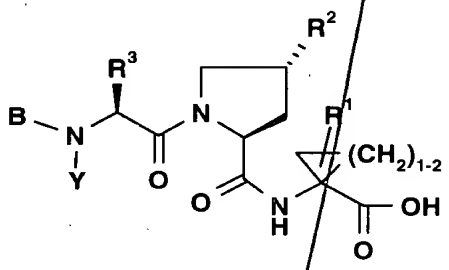
CLAIMS

WHAT IS CLAIMED IS:

1. A compound of formula (I) comprising the scope of the invention are racemates, diastereoisomers and optical isomers of



(I)

wherein **B** is H, a C_6 or C_{10} aryl, C_{7-16} aralkyl; Het or (lower alkyl)-Het, all of which optionally substituted with C_{1-6} alkyl; C_{1-6} alkoxy; C_{1-6} alkanoyl; hydroxy; hydroxyalkyl; halo; haloalkyl; nitro; cyano; cyanoalkyl; amino optionally substituted with C_{1-6} alkyl; amido; or (lower alkyl)amide;

or **B** is an acyl derivative of formula $\mathbf{R_4}$-C(O)-; a carboxyl of formula $\mathbf{R_4}$-O-C(O)-; an amide of formula $\mathbf{R_4}$-N($\mathbf{R_5}$)-C(O)-; a thioamide of formula $\mathbf{R_4}$-N($\mathbf{R_5}$)-C(S)-;or a sulfonyl of formula $\mathbf{R_4}$-SO_2 wherein

$\mathbf{R_4}$ is (i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy, amino optionally mono- or di-substituted with C_{1-6} alkyl, amido, or (lower alkyl) amide;

(ii) C_{3-7} cycloalkyl, C_{3-7} cycloalkoxy, or C_{4-10} alkylcycloalkyl, all optionally substituted with hydroxy, carboxyl, (C_{1-6} alkoxy)carbonyl, amino optionally mono- or di-substituted with C_{1-6} alkyl, amido, or (lower alkyl) amide;

(iii) amino optionally mono- or di-substituted with C_{1-6} alkyl; amido; or (lower alkyl)amide;

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl; or

(v) Het or (lower alkyl)-Het, both optionally substituted with C_{1-6} alkyl, hydroxy, amido, (lower alkyl) amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl;

$\mathbf{R_5}$ is H or C_{1-6} alkyl;

with the proviso that when $\mathbf{R_4}$ is an amide or a thioamide, $\mathbf{R_4}$ is not (ii) a cycloalkoxy;

Y is H or C_{1-6} alkyl;

R^3 is C_{1-8} alkyl, C_{3-7} cycloalkyl, or C_{4-10} alkylcycloalkyl, all optionally substituted with hydroxy, C_{1-6} alkoxy, C_{1-6} thioalkyl, amido, (lower alkyl)amido, C_6 or C_{10} aryl, or C_{7-16} aralkyl;

R_2 is CH_2-R_{20}, NH-R_{20}, O-R_{20} or S-R_{20}, wherein R_{20} is a saturated or unsaturated C_{3-7} cycloalkyl or C_{4-10} (alkylcycloalkyl), all of which being optionally mono-, di- or tri-substituted with R_{21},

or R_{20} is a C_6 or C_{10} aryl or C_{7-14} aralkyl, all optionally mono-, di- or tri-substituted with R_{21},

or R_{20} is Het or (lower alkyl)-Het, both optionally mono-, di- or tri-substituted with R_{21},

wherein each R_{21} is independently C_{1-6} alkyl; C_{1-6} alkoxy; lower thioalkyl; sulfonyl; NO_2; OH; SH; halo; haloalkyl; amino optionally mono- or di-substituted with C_{1-6} alkyl, C_6 or C_{10} aryl, C_{7-14} aralkyl, Het or (lower alkyl)-Het; amido optionally mono-substituted with C_{1-6} alkyl, C_6 or C_{10} aryl, C_{7-14} aralkyl, Het or (lower alkyl)-Het; carboxyl; carboxy(lower alkyl); C_6 or C_{10} aryl, C_{7-14} aralkyl or Het, said aryl, aralkyl or Het being optionally substituted with R_{22};

wherein R_{22} is C_{1-6} alkyl; C_{3-7} cycloalkyl; C_{1-6} alkoxy; amino optionally mono- or di-substituted with C_{1-6} alkyl; sulfonyl; (lower alkyl)sulfonyl; NO_2; OH; SH; halo; haloalkyl; carboxyl; amide; (lower alkyl)amide; or Het optionally substituted with C_{1-6} alkyl;

R^1 is H; C_{1-6} alkyl, C_{3-7} cycloalkyl, C_{2-6} alkenyl, or C_{2-6} alkynyl, all optionally substituted with halogen;

or a pharmaceutically acceptable salt or ester thereof.

2. A compound of formula I according to claim 1, wherein

B is a C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amido, or amino optionally substituted with C_{1-6} alkyl; or

B is Het or (lower alkyl)-Het, all optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amido, or amino optionally substituted with C_{1-6} alkyl.

3. A compound of formula I according to claim 1, wherein **B** is R_4-SO_2 wherein R_4 is C_{1-6} alkyl; amido; (lower alkyl)amido; C_6 or C_{10} aryl, C_{7-14} aralkyl or Het, all optionally

substituted with C_{1-6} alkyl.

4. A compound of formula I according to claim 1, wherein **B** is an acyl derivative of formula $\mathbf{R_4}$-C(O)- wherein $\mathbf{R_4}$ is

(i) C_{1-10} alkyl optionally substituted with carboxyl, hydroxy or C_{1-6} alkoxy, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl;

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, both optionally substituted with hydroxy, carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl;

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amido, (lower alkyl)amide, or amino optionally substituted with C_{1-6} alkyl;

(v) Het or (lower alkyl)-Het, both optionally substituted with C_{1-6} alkyl, hydroxy, amino optionally substituted with C_{1-6} alkyl, amido, (lower alkyl)amide, or amino optionally substituted with C_{1-6} alkyl.

5. A compound of formula I according to claim 1, wherein **B** is a carboxyl of formula $\mathbf{R_4}$-O-C(O)-, wherein $\mathbf{R_4}$ is

(i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy, amino optionally mono- or di-substituted with C_{1-6} alkyl, amido or (lower alkyl)amide;

(ii) C_{3-7} cycloalkyl, C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amino optionally mono- or di-substituted with C_{1-6} alkyl, amido or (lower alkyl)amide;

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl optionally substituted with C_{1-6} alkyl, hydroxy, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C_{1-6} alkyl, or

(v) Het or (lower alkyl)-Het, both optionally substituted with C_{1-6} alkyl, hydroxy, amino optionally mono- or di-substituted with C_{1-6} alkyl, amido or (lower alkyl)amido.

6. A compound of formula I according to claim 1, wherein **B** is an amide of formula $\mathbf{R_4}$-N($\mathbf{R_5}$)-C(O)- wherein $\mathbf{R_4}$ is

(i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C_{1-6} alkyl;

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C_{1-6} alkyl;

(iii) amino optionally mono- or di-substituted with C_{1-3} alkyl;

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amido, (lower alkyl)amide, or amino optionally substituted with C_{1-6} alkyl; or

(v) Het or (lower alkyl)-Het, both optionally substituted with C_{1-6} alkyl, hydroxy, amino optionally substituted with C_{1-6} alkyl, amido or (lower alkyl)amide; and

$\mathbf{R_5}$ is H or methyl.

7. A compound of formula I according to claim 1, wherein **B** is a thioamide of formula $\mathbf{R_4}$-NH-C(S)-; wherein $\mathbf{R_4}$ is

(i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl or C_{1-6} alkoxy;

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amino or amido.

8. A compound of formula I according to claim 2, wherein **B** is a C_6 or C_{10} aryl optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl.

9. A compound of formula I according to claim 2, wherein **B** is Het optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, halo, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl.

10. A compound of formula I according to claim 4, wherein **B** is an acyl derivative of formula $\mathbf{R_4}$-C(O)- wherein $\mathbf{R_4}$ is

(i) C_{1-10} alkyl optionally substituted with carboxyl, hydroxy or C_{1-6} alkoxy; or

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, both optionally substituted with hydroxy, carboxyl, (C_{1-6} alkoxy)carbonyl, or

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, or (v) Het optionally substituted with C_{1-6} alkyl, hydroxy, amido or amino.

11. A compound of formula I according to claim 5, wherein **B** is a carboxyl of formula $\mathbf{R_4}$-O-C(O)-, wherein $\mathbf{R_4}$ is

(i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6}

alkoxy or amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl;

(ii) C_{3-7} cycloalkyl, C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl, or

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amino optionally substituted with C_{1-6} alkyl; or

(v) Het or (lower alkyl)-Het, both optionally substituted with C_{1-6} alkyl, hydroxy, amido, or amino optionally mono-substituted with C_{1-6} alkyl.

12. A compound of formula I according to claim 6, wherein **B** is an amide of formula $\mathbf{R_4}$-N($\mathbf{R_5}$)-C(O)- wherein $\mathbf{R_4}$ is

(i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl;

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl;

(iii) amino optionally mono- or di-substituted with C_{1-3} alkyl, or

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amino or amido optionally substituted with C_{1-6} alkyl; or

(v) Het optionally substituted with C_{1-6} alkyl, hydroxy, amino or amido,

and $\mathbf{R_5}$ is H.

13. A compound of formula I according to claim 7, wherein **B** is a thioamide of formula $\mathbf{R_4}$-NH-C(S)-; wherein $\mathbf{R_4}$ is (i) C_{1-10} alkyl; or (ii) C_{3-7} cycloalkyl.

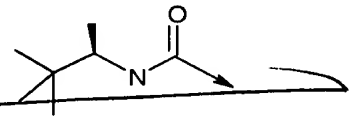
14. A compound of formula I according to claim 12, wherein **B** is an amide of formula $\mathbf{R_4}$-NH-C(O)- wherein $\mathbf{R_4}$ is

(i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl;

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl;

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl optionally substituted with C_{1-6} alkyl, hydroxy, amino or amido.

15. A compound of formula I according to claim 1, wherein **B** is



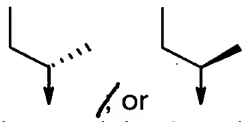
tert-butoxycarbonyl (Boc) or

16. A compound of formula I according to claim 1, wherein **Y** is H or methyl.

17. A compound of formula I according to claim 16, wherein **Y** is H.

18. A compound of formula I according to claim 1, wherein $\mathbf{R^3}$ is C_{1-8} alkyl, C_{3-7} cycloalkyl, or C_{4-10} alkylcycloalkyl, all optionally substituted with hydroxy, C_{1-6} alkoxy, C_{1-6} thioalkyl, acetamido, C_6 or C_{10} aryl, or C_{7-16} aralkyl,.

19. A compound of formula I according to claim 18, wherein $\mathbf{R^3}$ is the side chain of *tert*-butylglycine (Tbg), Ile, Val, Chg or:



, or

20. A compound of formula I according to claim 19, wherein $\mathbf{R^3}$ is the side chain of Tbg, Chg or Val.

21. A compound of formula I according to claim 1, wherein $\mathbf{R_2}$ is S-$\mathbf{R_{20}}$ or O-$\mathbf{R_{20}}$ wherein $\mathbf{R_{20}}$ is a C_6 or C_{10} aryl, C_{7-16} aralkyl, Het or -CH_2-Het, all optionally mono-, di- or tri-substituted with $\mathbf{R_{21}}$, wherein

$\mathbf{R_{21}}$ is C_{1-6} alkyl; C_{1-6} alkoxy; lower thioalkyl; amino or amido optionally mono- or di-substituted with C_{1-6} alkyl, C_6 or C_{10} aryl, C_{7-16} aralkyl, Het or (lower alkyl)-Het; NO_2; OH; halo; trifluoromethyl; carboxyl; C_6 or C_{10} aryl, C_{7-16} aralkyl, or Het, said aryl, aralkyl or Het being optionally substituted with $\mathbf{R_{22}}$, wherein

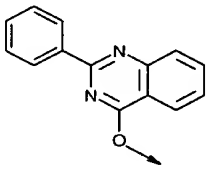
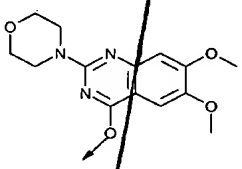
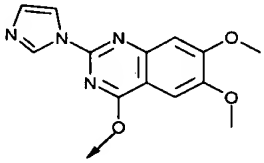
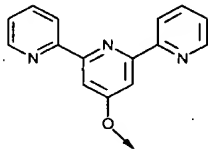
$\mathbf{R_{22}}$ is C_{1-6} alkyl; C_{3-7} cycloalkyl; C_{1-6} alkoxy; amino; mono- or di-(lower alkyl)amino; (lower alkyl)amide; sulfonylalkyl; NO_2; OH; halo; trifluoromethyl; carboxyl or Het.

22. A compound of formula I according to claim 21, wherein $\mathbf{R_{21}}$ is C_{1-6} alkyl; C_{1-6} alkoxy; amino; di(lower alkyl)amino; (lower alkyl)amide; C_6 or C_{10} aryl, or Het, said aryl or Het being optionally substituted with $\mathbf{R_{22}}$, wherein $\mathbf{R_{22}}$ is C_{1-6} alkyl; C_{3-7} cycloalkyl; C_{1-6} alkoxy; amino; mono- or di(lower alkyl)amino; amido; (lower alkyl)amide; halo; trifluoromethyl or Het.

23. A compound of formula I according to claim 22, wherein $\mathbf{R_{22}}$ is C_{1-6} alkyl; C_{1-6} alkoxy; halo; amino optionally mono- or di-substituted with lower alkyl; amido; (lower alkyl)amide; or Het.

24. A compound of formula I according to claim 23, wherein R_{22} is methyl; ethyl; isopropyl; tert-butyl; methoxy; chloro; amino optionally mono- or di-substituted with lower alkyl; amido, (lower alkyl)amide; or (lower alkyl) 2-thiazole.

25. A compound of formula I according to claim 21, wherein R_2 is selected from the group consisting of:


; 
; 
; and 
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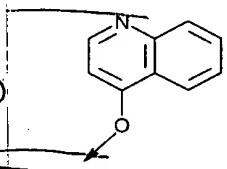
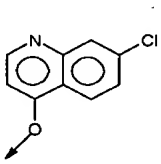
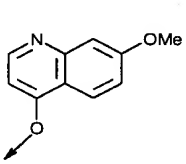
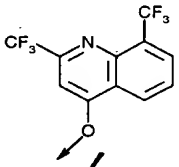
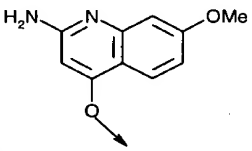
26. A compound of formula I according to claim 21, wherein R_2 is 1-naphthylmethoxy; 2-naphthylmethoxy; benzyloxy, 1-naphthyloxy; 2-naphthyloxy; or quinolinoxy unsubstituted , mono- or di-substituted with R_{21} as defined in claim 21.

27. A compound of formula I according to claim 26, wherein R_2 is 1-naphtylmethoxy; or quinolinoxy unsubstituted, mono- or di-substituted with R_{21} as defined in claim 26.

28. A compound of formula I according to claim 27, wherein R_2 is selected from the group consisting of:


; 
; 
; 
; and 
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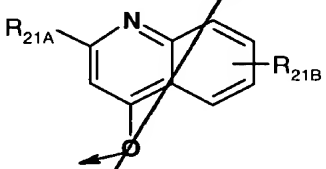
29. A compound of formula I according to claim 26, wherein R_2 is :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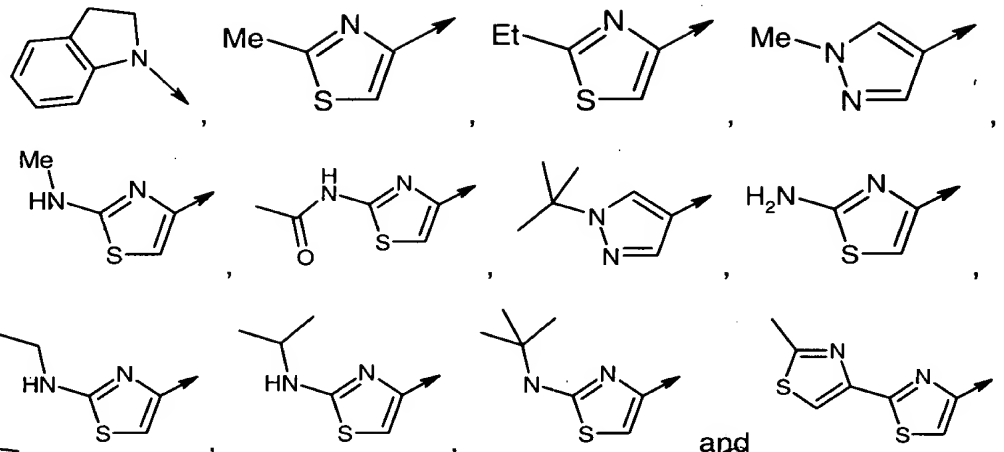
wherein R_{21A} is C_{1-6} alkyl; C_{1-6} alkoxy; lower thioalkyl; halo; amino optionally mono-substituted with C_{1-6} alkyl; or C_6, C_{10} aryl, C_{7-16} aralkyl, or Het, sais aryl, aralkyl or Het optionally substituted with R_{22} wherein R_{22} is C_{1-6} alkyl, C_{1-6} alkoxy, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl, or Het; and

R_{21B} is C_{1-6} alkyl, C_{1-6} alkoxy, amino, di(lower alkyl)amino, (lower alkyl)amide, NO_2, OH, halo, trifluoromethyl, or carboxyl.

30. A compound of formula I according to claim 29, wherein R_{21A} is C_6, C_{10} aryl or Het, all optionally substituted with R_{22} as defined in claim 30.

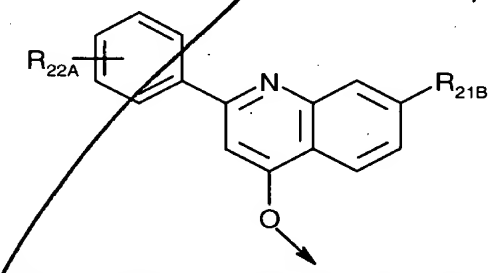
31. A compound of formula I according to claim 30, wherein R_{21A} is selected from the

group consisting of:



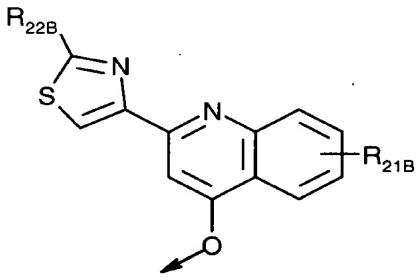
and

32. A compound of formula I according to claim 29, wherein R_2 is:



wherein R_{22A} is C_{1-6} alkyl; C_{1-6} alkoxy; or halo; and R_{21B} is C_{1-6} alkyl, C_{1-6} alkoxy, amino, di(lower alkyl)amino, (lower alkyl)amide, NO_2, OH, halo, trifluoromethyl, or carboxyl.

33. A compound of formula I according to claim 29, wherein R_2 is:



wherein R_{22B} is C_{1-6} alkyl, amino optionally mono-substituted with C_{1-6} alkyl, amido, or (lower alkyl)amide; and R_{21B} is C_{1-6} alkyl, C_{1-6} alkoxy, amino, di(lower alkyl)amino, (lower alkyl)amide, NO_2, OH, halo, trifluoromethyl, or carboxyl.

34. A compound of formula I according to claim 32 or 33, wherein R_{21B} is C_{1-6} alkoxy, or di(lower alkyl)amino.

35. A compound of formula I according to claim 32 or 33, wherein R_{21B} is methoxy.

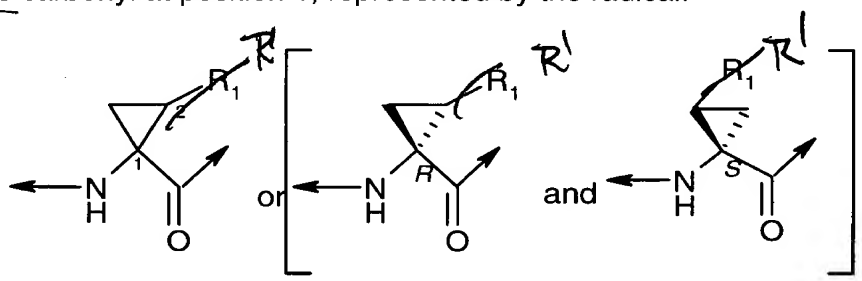
~~36. A compound of formula I according to claim 1, wherein **P1** is a cyclobutyl or~~

cyclopropyl ring, both optionally substituted with R_1, wherein R^1 is H, C_{1-3} alkyl, C_{3-5} cycloalkyl, or C_{2-4} alkenyl, all optionally substituted with halo.

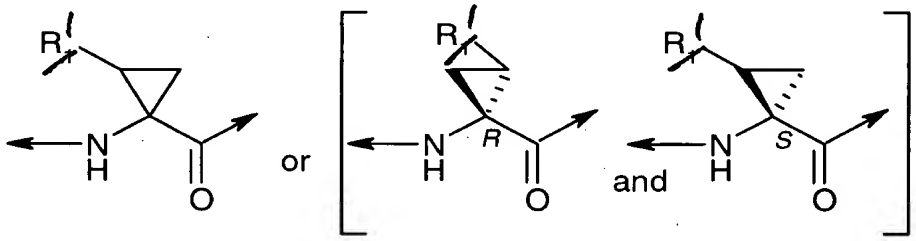
37. A compound of formula I according to claim 36, wherein **P1** is cyclopropyl and R^1 is ~~ethyl, vinyl, cyclopropyl, 1 or 2-bromoethyl or 1 or 2-bromovinyl.~~

38. A compound of formula I according to claim ~~37~~, wherein R_1 is vinyl.

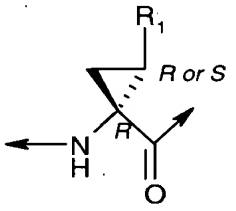
39. A compound of formula I according to claim ~~37~~, wherein R_1 at carbon 2 is orientated *syn* to the carbonyl at position 1, represented by the radical:



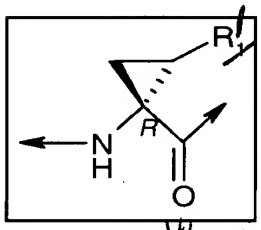
40. A compound of formula I according to claim ~~37~~, wherein R_1 at position 2 is orientated *anti* to the carbonyl at position 1, represented by the radical:



41. A compound of formula I according to claim ~~37~~, wherein carbon 1 has the *R* configuration:



42. An optical isomer of a compound of formula I according to claim ~~41~~, wherein said R_1 substituent and the carbonyl in a *syn* orientation in the following absolute configuration:



43. A compound of formula I according to claim 42, wherein R_1 is ethyl, hence the asymmetric carbon atoms at positions 1 and 2 have the *R,R* configuration.

44. A compound of formula I according to claim 42, wherein R_1 is vinyl, hence the asymmetric carbon atoms at positions 1 and 2 have the *R,S* configuration.

45. A compound of formula I according to claim 1, wherein

B is a C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amido, or amino optionally substituted with C_{1-6} alkyl; or

Het or (lower alkyl)-Het, all optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amido, or amino optionally substituted with C_{1-6} alkyl,. or

B is R_4-SO_2 wherein R_4 is preferably amido; (lower alkyl)amide; C_6 or C_{10} aryl, C_{7-14} aralkyl or Het, all optionally substituted with C_{1-6} alkyl, or

B is an acyl derivative of formula R_4-C(O)- wherein R_4 is

(i) C_{1-10} alkyl optionally substituted with carboxyl, hydroxy or C_{1-6} alkoxy, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl;

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, both optionally substituted with hydroxy, carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl;

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amido, (lower alkyl)amide, or amino optionally substituted with C_{1-6} alkyl;

(v) Het or (lower alkyl)-Het, both optionally substituted with C_{1-6} alkyl, hydroxy, amino optionally substituted with C_{1-6} alkyl, amido, (lower alkyl)amide, or amino optionally substituted with C_{1-6} alkyl, or

B is a carboxyl of formula R_4-O-C(O)-, wherein R_4 is

(i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy, amino optionally mono- or di-substituted with C_{1-6} alkyl, amido or (lower alkyl)amide;

(ii) C_{3-7} cycloalkyl, C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amino optionally mono- or di-substituted with C_{1-6} alkyl, amido or (lower alkyl)amide;

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl optionally substituted with C_{1-6} alkyl, hydroxy, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C_{1-6} alkyl; or

(v) Het or (lower alkyl)-Het, both optionally substituted with C_{1-6} alkyl, hydroxy, amino optionally mono- or di-substituted with C_{1-6} alkyl, amido or (lower alkyl)amido, or

B is an amide of formula $\mathbf{R_4}$-N($\mathbf{R_5}$)-C(O)- wherein $\mathbf{R_4}$ is

(i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C_{1-6} alkyl;

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amido, or amino optionally mono- or di-substituted with C_{1-6} alkyl;

(iii) amino optionally mono- or di-substituted with C_{1-3} alkyl;

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amido, (lower alkyl)amide, or amino optionally substituted with C_{1-6} alkyl; or

(v) Het or (lower alkyl)-Het, both optionally substituted with C_{1-6} alkyl, hydroxy, amino optionally substituted with C_{1-6} alkyl, amido or (lower alkyl)amide; and

$\mathbf{R_5}$ is H or methyl, or

B is thioamide of formula $\mathbf{R_4}$-NH-C(S)-; wherein $\mathbf{R_4}$ is

(i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl or C_{1-6} alkoxy;

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amino or amido;

Y is H or methyl;

$\mathbf{R^3}$ is C_{1-8} alkyl, C_{3-7} cycloalkyl, or C_{4-10} alkylcycloalkyl, all optionally substituted with hydroxy, C_{1-6} alkoxy, C_{1-6} thioalkyl, acetamido, C_6 or C_{10} aryl, or C_{7-16} aralkyl;

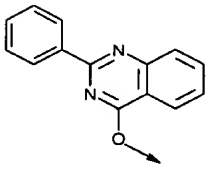
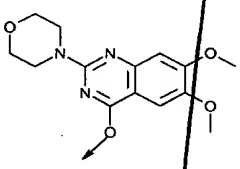
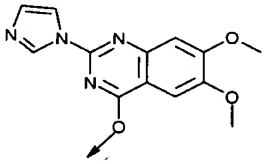
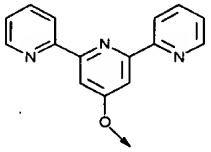
$\mathbf{R_2}$ is S-$\mathbf{R_{20}}$ or O-$\mathbf{R_{20}}$ wherein $\mathbf{R_{20}}$ is preferably a C_6 or C_{10} aryl, C_{7-16} aralkyl, Het or -CH_2-Het, all optionally mono-, di- or tri-substituted with $\mathbf{R_{21}}$, wherein

$\mathbf{R_{21}}$ is C_{1-6} alkyl; C_{1-6} alkoxy; lower thioalkyl; amino or amido optionally mono-

or di-substituted with C_{1-6} alkyl, C_6 or C_{10} aryl, C_{7-16} aralkyl, Het or (lower alkyl)-Het; NO_2; OH; halo; trifluoromethyl; carboxyl; C_6 or C_{10} aryl, C_{7-16} aralkyl, or Het, said aryl, aralkyl or Het being optionally substituted with $\mathbf{R_{22}}$, wherein

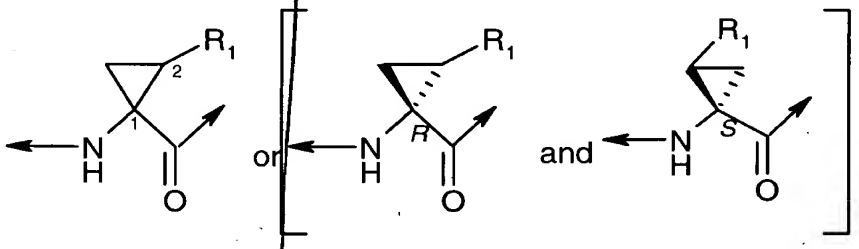
$\mathbf{R_{22}}$ is C_{1-6} alkyl; C_{3-7} cycloalkyl; C_{1-6} alkoxy; amino; mono- or di-(lower alkyl)amino; (lower alkyl)amide; sulfonylalkyl; NO_2; OH; halo; trifluoromethyl; carboxyl or Het; or

$\mathbf{R_2}$ is selected from the group consisting of:


;

;

; and

;

or $\mathbf{R_2}$ is 1-naphthylmethoxy; 2-naphthylmethoxy; benzyloxy, 1-naphthyloxy; 2-naphthyloxy; or quinolinoxy unsubstituted , mono- or di-substituted with $\mathbf{R_{21}}$ as defined above; and

the **P1** segment is a cyclopropyl ring, both optionally substituted with $\mathbf{R_1}$, wherein $\mathbf{R^1}$ is C_{1-3} alkyl, C_{3-5} cycloalkyl, or C_{2-4} alkenyl optionally substituted with halo, and said $\mathbf{R_1}$ at carbon 2 is orientated *syn* to the carbonyl at position 1, represented by the radical:



;

or a pharmaceutically acceptable salt or ester thereof.

46. A compound of formula I according to claim 45, wherein **B** is a C_6 or C_{10} aryl optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, hydroxyalkyl, halo, haloalkyl, nitro, cyano, cyanoalkyl, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl; or **B** is Het optionally substituted with C_{1-6} alkyl, C_{1-6} alkoxy, C_{1-6} alkanoyl, hydroxy, halo, amido, (lower alkyl)amide, or amino optionally mono- or di-substituted with C_{1-6} alkyl; or **B** is $\mathbf{R_4}$-SO_2 wherein $\mathbf{R_4}$ is C_6 or C_{10} aryl, a C_{7-14} aralkyl or Het all optionally substituted with C_{1-6} alkyl; amido, (lower alkyl)amide; **B** is an acyl derivative of

formula R_4-C(O)- wherein R_4 is

(i) C_{1-10} alkyl optionally substituted with carboxyl, hydroxy or C_{1-6} alkoxy; or

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, both optionally substituted with hydroxy, carboxyl, (C_{1-6} alkoxy)carbonyl; or

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy; or

(v) Het optionally substituted with C_{1-6} alkyl, hydroxy, amido or amino;

or **B** is a carboxyl of formula R_4-O-C(O)-, wherein R_4 is

(i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy or amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl;

(ii) C_{3-7} cycloalkyl, C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl; or

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amino optionally substituted with C_{1-6} alkyl; or

(v) Het or (lower alkyl)-Het, both optionally substituted with C_{1-6} alkyl, hydroxy, amido, or amino optionally mono-substituted with C_{1-6} alkyl;

or **B** is an amide of formula R_4-N(R_5)-C(O)- wherein R_4 is

(i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl;

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl; and R_5 is H or methyl; or

R_4 is (iii) amino optionally mono- or di-substituted with C_{1-3} alkyl; or

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl, all optionally substituted with C_{1-6} alkyl, hydroxy, amino or amido optionally substituted with C_{1-6} alkyl; or

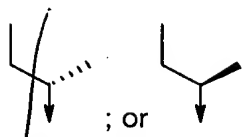
(v) Het optionally substituted with C_{1-6} alkyl, hydroxy, amino or amido; or

B is a thioamide of formula R_4-NH-C(S)-; wherein R_4 is:

(i) C_{1-10} alkyl; or (ii) C_{3-7} cycloalkyl; or

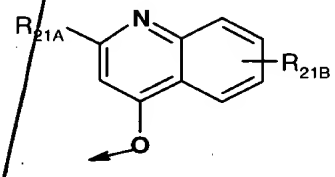
Y is H;

R^3 is the side chain of *tert*-butylglycine (Tbg), Ile, Val, Chg or:


; or ;

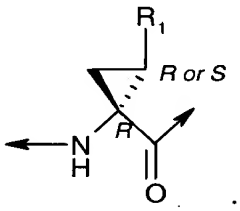
$\mathbf{R_2}$ is 1-naphtylmethoxy; or quinolinoxy unsubstituted, mono- or di-substituted with $\mathbf{R_{21}}$ as defined above, or

$\mathbf{R_2}$ is :



wherein $\mathbf{R_{21A}}$ is C_{1-6} alkyl; C_{1-6} alkoxy; C_6, C_{10} aryl or Het; lower thioalkyl; halo; amino optionally mono-substituted with C_{1-6} alkyl; or C_6,C_{10} aryl, C_{7-16} aralkyl or Het, optionally substituted with $\mathbf{R_{22}}$ wherein $\mathbf{R_{22}}$ is C_{1-6} alkyl, C_{1-6} alkoxy, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl, or Het;

P1 is a cyclopropyl ring wherein carbon 1 has the *R* configuration,


; and

$\mathbf{R^1}$ is ethyl, vinyl, cyclopropyl, 1 or 2-bromoethyl or 1 or 2-bromovinyl.

47. A compound of formula I according to claim 46, wherein

B is an amide of formula $\mathbf{R_4}$-NH-C(O)- wherein $\mathbf{R_4}$ is

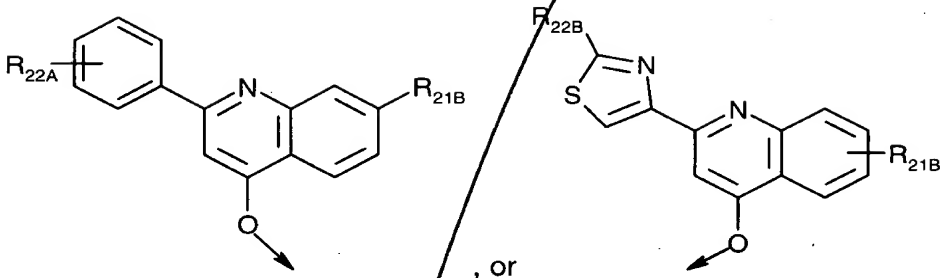
i) C_{1-10} alkyl optionally substituted with carboxyl, C_{1-6} alkanoyl, hydroxy, C_{1-6} alkoxy amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl;

(ii) C_{3-7} cycloalkyl or C_{4-10} alkylcycloalkyl, all optionally substituted with carboxyl, (C_{1-6} alkoxy)carbonyl, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl;

(iv) C_6 or C_{10} aryl or C_{7-16} aralkyl optionally substituted with C_{1-6} alkyl, hydroxy, amino or amido;

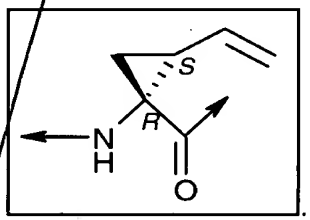
$\mathbf{R_2^3}$ is the side chain of Tbg, Chg or Val;

$\mathbf{R_1}$ is:

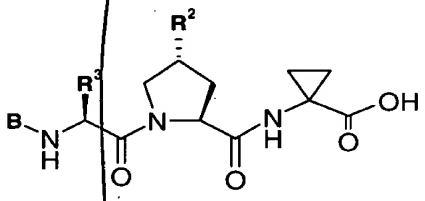


, or

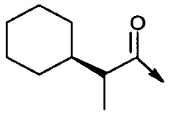
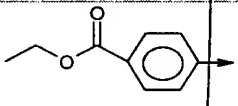
wherein $\mathbf{R_{22A}}$ is C_{1-6} alkyl (such as methyl); C_{1-6} alkoxy (such as methoxy); or halo (such as chloro); $\mathbf{R_{22B}}$ is C_{1-6} alkyl, amino optionally mono-substituted with C_{1-6} alkyl, amido, or (lower alkyl)amide; and $\mathbf{R_{21B}}$ is C_{1-6} alkyl, C_{1-6} alkoxy, amino, di(lower alkyl)amino, (lower alkyl)amide, NO_2, OH, halo, trifluoromethyl, or carboxyl; and **P1** is:

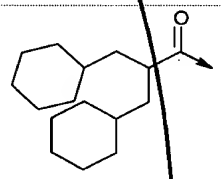
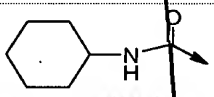
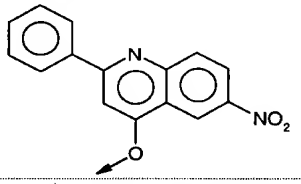
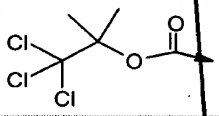
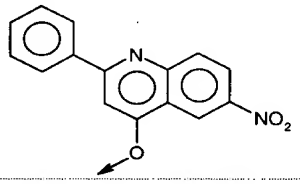
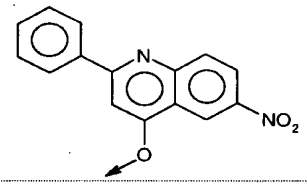
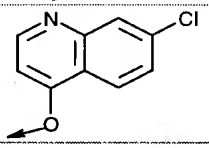
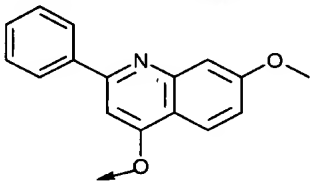


48. A compound according to claim 45 represented by the formula:



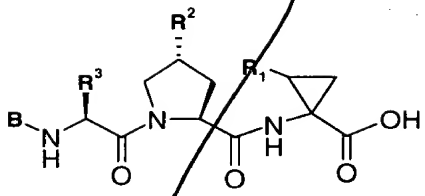
wherein **B**, $\mathbf{R_3}$, $\mathbf{R_2}$ are as defined below:

Tab 1 Cpd#	B	R_3	R_2	
101	Boc	cHex	-O-CH_2-1-naphthyl	;
102		cHex	-O-CH_2-1-naphthyl	;
103		cHex	-O-CH_2-1-naphthyl	;

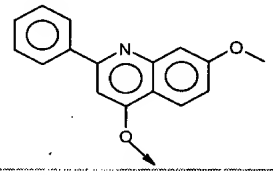
Tab 1 Cpd#	B	R_3	R_2	
104		cHex	-O-CH_2-1-naphthyl	;
105		cHex	-O-CH_2-1-naphthyl	;
106	Boc	cHex		;
107		cHex	-O-CH_2-1-naphthyl	;
108	Boc	iPr		;
109	acetyl	cHex		;
110	Boc	*i-Pr*		;
and 111	Boc	*t*-Bu		.

49. Compound # **111** according to claim 48.

50. A compound according to claim 45 represented by the formula:

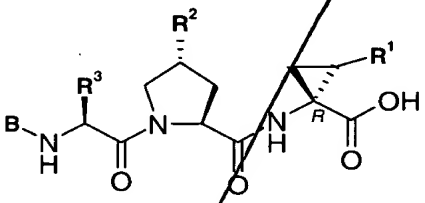


wherein **B**, R_3, R_2, R_1 are as defined below:

Table 2 Cpd #	B	R_3	R_2	R_1 anti to carboxy
201	Boc	cyclohexyl	-O-CH_2-1-naphthyl	ethyl (one isomer) ;
202	Boc	cyclohexyl	-O-CH_2-1-naphthyl	ethyl (other isomer) ;
and 203	Boc	*t*-Bu		vinyl *1R, 2R* .

51. Compound **#203** according to claim 48.

52. A compound according to claim 45 represented by the formula:



wherein **B**, R_3, R_2 and R_1 are as defined below:

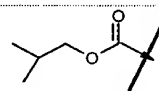
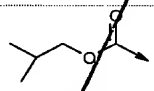
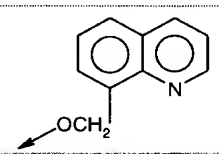
Table 3 Cpd #	B	R_3	R_2	R_1 *syn* to carboxyl
301	Boc	cHex	-O-CH_2-1-naphthyl	ethyl ;
302		iPr	-O-CH_2-1-naphthyl	ethyl ;
303		cHex	-O-CH_2-1-naphthyl	ethyl ;
304	Boc	cHex		ethyl ;
305	Boc	cHex	-O-CH_2-1-naphthyl	vinyl ;

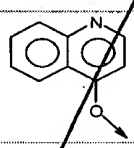
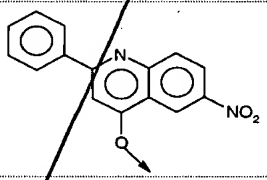
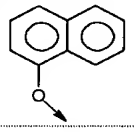
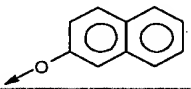
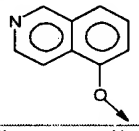
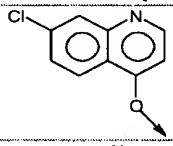
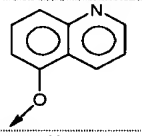
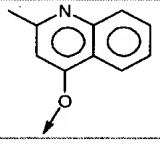
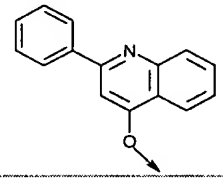
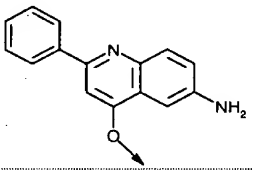
Table 3 Cpd #	B	R_3	R_2	R_1 *syn* to carboxyl	
306	Boc	cHex		vinyl	;
307	Boc	cHex		vinyl	;
308	Boc	cHex		vinyl	;
309	Boc	cHex		vinyl	;
310	Boc	cHex		vinyl	;
311	Boc	cHex		vinyl	;
312	Boc	cHex		vinyl	;
313	Boc	cHex		vinyl	;
314	Boc	cHex		vinyl	;
315	Boc	cHex		vinyl	;

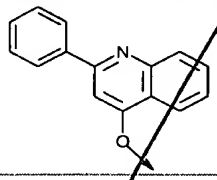
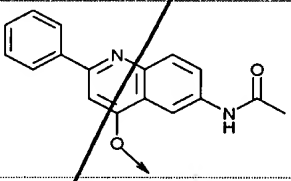
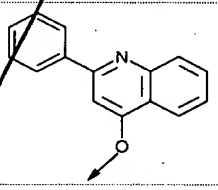
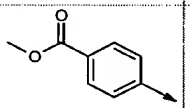
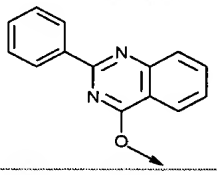
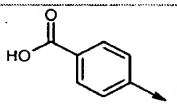
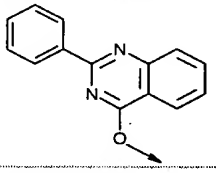
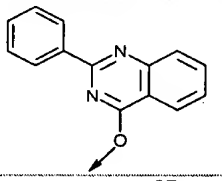
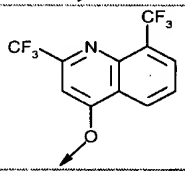
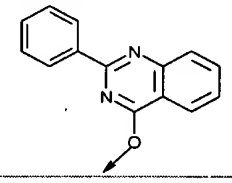
Table 3 Cpd #	B	R_3	R_2	R_1 *syn* to carboxyl	
316	Acetyl	cHex		vinyl	;
317	Boc	cHex		vinyl	;
318	CF_3-C(O)-	*i-Pr*		vinyl	;
319		cHex		vinyl	;
320		cHex		vinyl	;
321	Boc	*t*-Bu		vinyl	;
322	Boc	*t*-Bu		vinyl	;
323	Boc	*t*-Bu			;

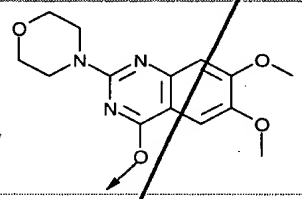
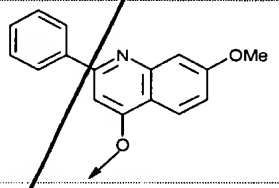
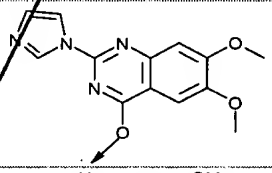
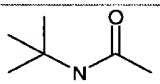
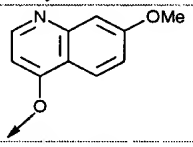
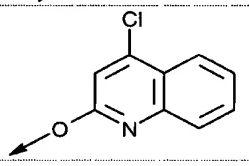
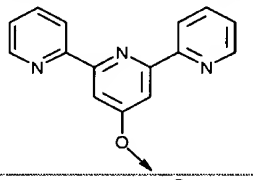
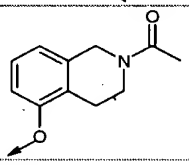
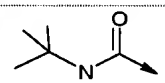
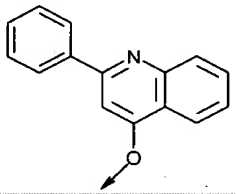
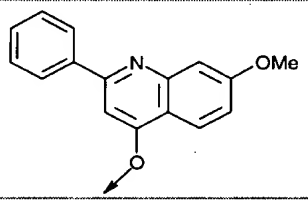
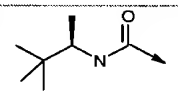
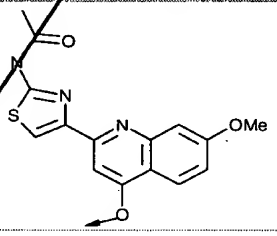
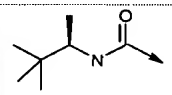
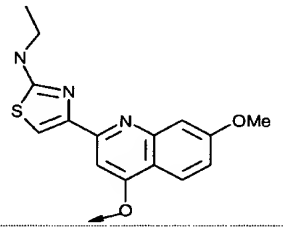
Table 3 Cpd #	B	R_3	R_2	R_1 *syn* to carboxyl	
324	Boc	*t*-Bu		vinyl	;
325	Boc	*t*-Bu			;
326	Boc	*t-Bu*		vinyl	;
327		*t*-Bu		vinyl	;
328	Boc	*t*-Bu		vinyl	;
329	Boc	*t*-Bu		vinyl	;
330	Boc	*t-Bu*		vinyl	;
331		*t*-Bu		vinyl	;
332	Boc	*t*-Bu		ethyl	;

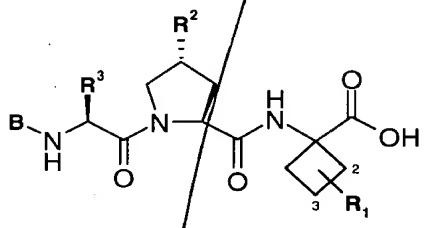
Table 3 Cpd #	B	R_3	R_2	R_1 *syn* to carboxyl
333		*t*-Bu		vinyl
and 334		*t*-Bu		vinyl

;

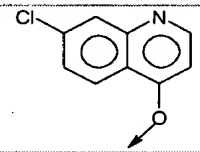
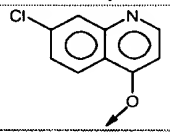
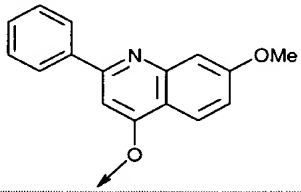
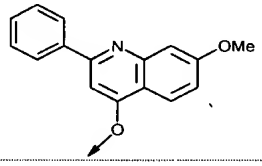
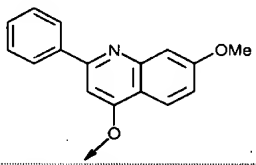
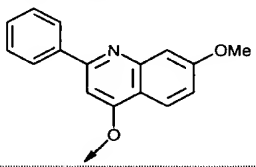
.

53. A compound according to claim 52, selected from the group consisting of compound #: **307,314, 317, 319, 321, 324, 325, 326, 327, 329, 331, 332, 333,** and **334.**

54. A compound according to claim 45 represented by the formula:

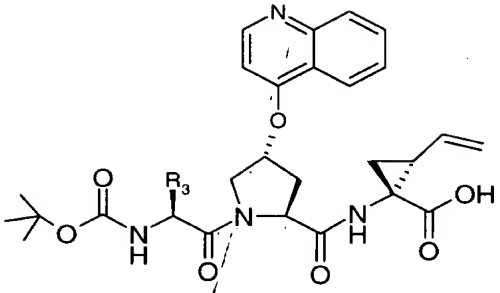


wherein **B**, R_3, R_2 and R_1 are as defined below:

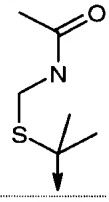
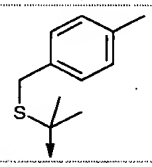
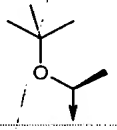
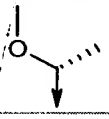
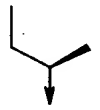
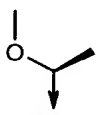
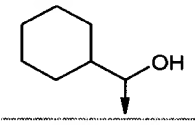
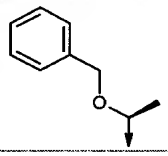
Table 4 Cpd #	B	R_3	R_2	R_1	
401	Boc	*i*-Pr		H	;
402	Boc	*t*-Bu		H	;
403	Boc	*t*-Bu		H	;
404	Boc	*t*-Bu		3-(=CH_2)	;
405	Boc	*t*-Bu		2-vinyl	;
and 406	Boc	*t*-Bu		2-Et	.

55. A compound according to claim 54, selected from the group consisting of compound #: **403, 405,** and **406.**

56. A compound according to claim 45 represented by the formula:

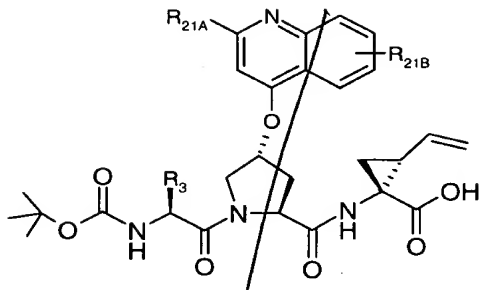


wherein R_3 is as defined below:

Table 5 Cpd #	R_3		Table 5 Cpd #	R_3	
501	*t-Bu*	;	**507**		;
502	H	;	**508**		;
503		;	**509**		;
504		;	**510**		;
505		;	**and 511**		.
506		;			

57. A compound according to claim 56, selected from the group consisting of compound #: **501, 509,** and **510.**

58. A compound according to claim 46 represented by the formula:



wherein R_3, R_{21A} and R_{21B} are as defined below:

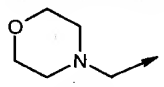
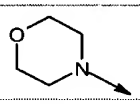
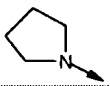
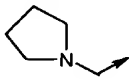
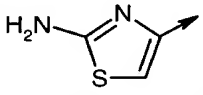
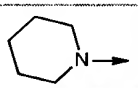
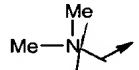
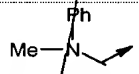
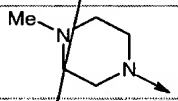
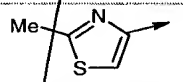
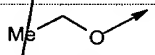
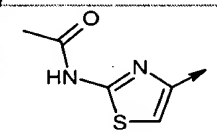
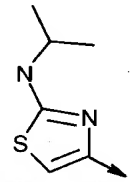
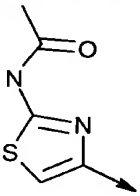
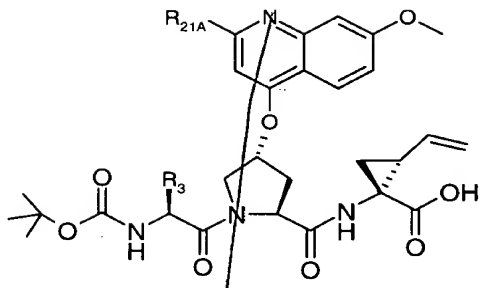
Table 6 Cpd #	R_3	R_{21A}	R_{21B}	
601	*i*-Pr	Ph	7-OMe	;
602	*t-Bu*	Ph	8-OMe, 7-OMe	;
603	*i-Pr*	Ph	7-ethyl	;
604	*t-Bu*	--	7-OMe	;
605	*t-Bu*	Ph	7-O-*i*Pr	;
606	*t*-Bu	--	7-Cl	;
607	*i*Pr	--	7-Cl	;
608	CH_2-*i*Pr	--	7-Cl	;
609	*t*-Bu		--	;
610	*t*-Bu	Cl	--	;
611	*t*-Bu	Ph	7-$N(Me)_2$	;
612	*t*-Bu		--	;
613	*t*-Bu		--	;
614	*t*-Bu		--	;
615	*t*-Bu	--	7-$N(Me)_2$	;
616	*t*-Bu		--	;
617	*t*-Bu		--	;

Table 6 Cpd #	R_3	R_{21A}	R_{21B}	
618	*t*-Bu		--	;
619	*t*-Bu		--	;
620	*t*-Bu		--	;
621	*t*-Bu		--	;
622	*t*-Bu		--	;
623	*t*-Bu	MeO-	--	;
624	*t*-Bu	$(Me)_2N$-	--	;
625	*t*-Bu	Ph	7-S(Me)	;
626	*t*-Bu	Ph	7-Br	;
627	*t*-Bu	Ph	7-F	;
628	*t*-Bu		7-$N(Me)_2$	;
629	*t*-Bu		7-$N(Me)_2$	;
and 630	*t*-Bu		7-$N(Et)_2$	.

59. A compound according to claim 58, selected from the group consisting of compound #: **601, 602, 603, 604, 605, 606, 607, 610, 611, 612, 615, 616, 617, 620, 621, 622, 625, 626, 627, 628, 629,** and **630.**

60. A compound according to claim 46 represented by the formula:



wherein R_3 and R_{21A} are as defined below:

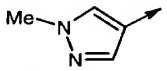
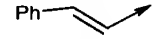
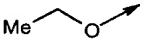
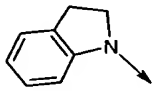
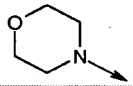
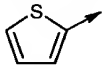
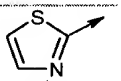
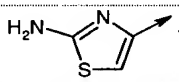
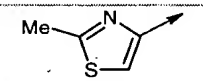
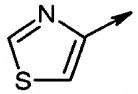
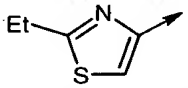
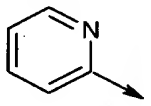
Table 7 Cpd #	R_3	R_{21A}	
701	*t*-Bu		;
702	*t*-Bu		;
703	*t*-Bu		;
704	*t*-Bu		;
705	*t*-Bu		;
706	*t*-Bu		;
707	*t*-Bu		;
708	*t*-Bu	Ph-N(Me)-	;
709	*t*-Bu		;
710	*t*-Bu	HOOC-	;
711	*t*-Bu		;
712	*t*-Bu	$(Me)_2N$-	;
713	*t*-Bu		;
714	*t*-Bu		;
715	*t*-Bu		;

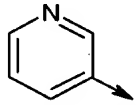
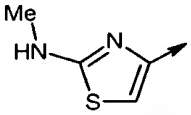
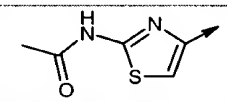
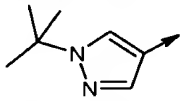
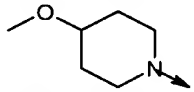
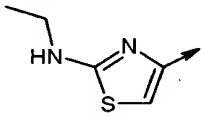
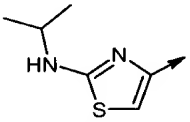
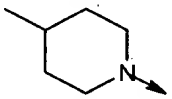
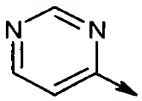
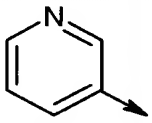
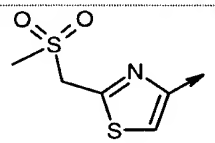
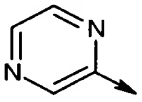
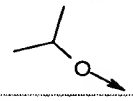
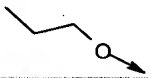
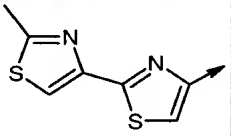
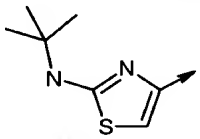
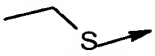
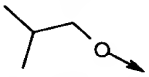
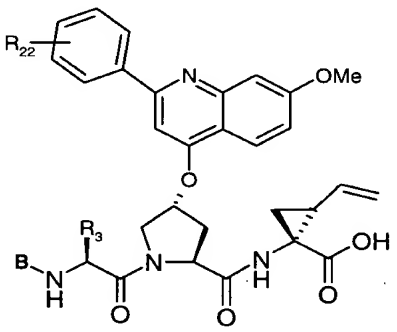
Table 7 Cpd #	R_3	R_{21A}	
716	*t*-Bu		;
717	*t*-Bu		;
718	*t*-Bu	NH_2	;
719	*t*-Bu		;
720	*t*-Bu		;
721	*t*-Bu		;
722	*t*-Bu		;
723	*t*-Bu		;
724	*t*-Bu		;
725	*t*-Bu		;
726	*t*-Bu	*i*-Pr	;
727	*t*-Bu		;
728	*t*-Bu		;
729	*t*-Bu		;

Table 7 Cpd #	R_3	R_{21A}	
730	*t*-Bu		;
731	*t*-Bu		;
732	*t*-Bu		;
733	*t*-Bu		;
734	*t*-Bu		;
735	*t*-Bu		;
736	*t*-Bu	*t*-Bu	;
and 737	*t*-Bu	CHex	.

61. A compound according to claim 60, selected from the group consisting of compound #: **701, 702, 703, 704, 705, 706, 707, 708, 709, and 711 to 737.**

62. A compound according to claim 45 represented by the formula:



wherein **B**, R_3, and R_{22} are as defined below:

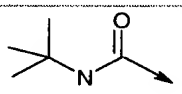
Table 8 Cpd #	B	R_3	R_{22}	
801		*t*-Bu	--	;

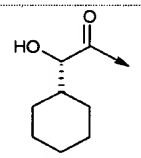
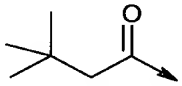
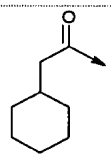
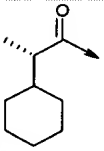
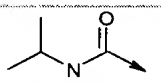
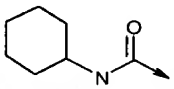
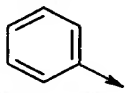
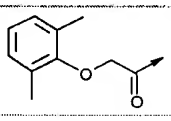
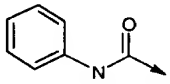
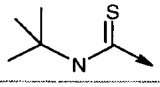
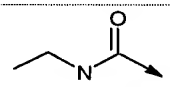
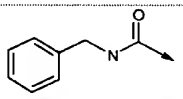
Table 8 Cpd #	B	R_3	R_{22}	
802		*t*-Bu	--	;
803		*t*-Bu	--	;
804		*t*-Bu	--	;
805	Ac	*t*-Bu	--	;
806		*t*-Bu	--	;
807		*t*-Bu	--	;
808		*t*-Bu	--	;
809		*i*-Pr	--	;
810		*t*-Bu	--	;
811	Boc	*t*-Bu	4-Cl	;
812		*t*-Bu	--	;
813		*t*-Bu	--	;
814	Boc	*t*-Bu	2-Cl	;
815	Boc	*t*-Bu	3-Cl	;
816		*t*-Bu	--	;
817		*t*-Bu	--	;

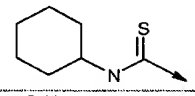
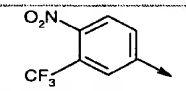
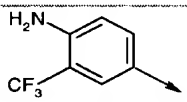
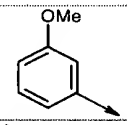
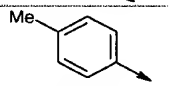
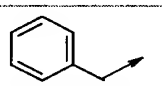
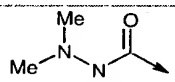
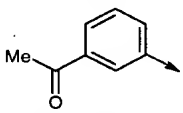
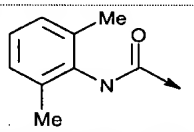
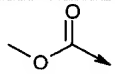
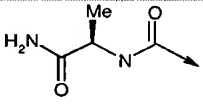
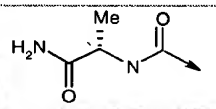
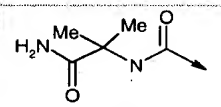
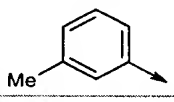
Table 8 Cpd #	B	R_3	R_{22}	
818		*t*-Bu	--	;
819		*i*-Pr	--	;
820		*i*-Pr	--	;
821		*i*-Pr	--	;
822		*i*-Pr	--	;
823	Boc	*t*-Bu	2-OMe	;
824	Boc	*t*-Bu	3-OMe	;
825	Boc	*t*-Bu	4-OMe	;
826		*i*-Pr	--	;
827		*t*-Bu	--	;
828		*i*-Pr	--	;
829		*t*-Bu	--	;
830		*t*-Bu	--	;
831		*t*-Bu	--	;
832		*t*-Bu	--	;
833		*t*-Bu	--	;
834		*i*-Pr	--	;

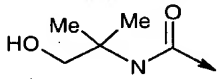
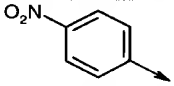
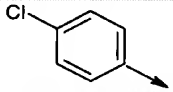
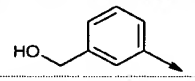
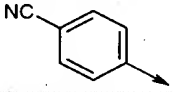
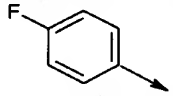
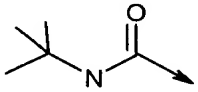
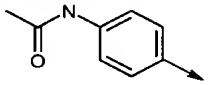
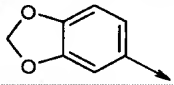
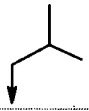
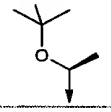
Table 8 Cpd #	B	R_3	R_{22}	
835		*t*-Bu	--	;
836		*i*-Pr	--	;
837		*i*-Pr	--	;
838		*i*-Pr	--	;
839		*i*-Pr	--	;
840		*i*-Pr	--	;
841	Boc	*t*-Bu	2-Me	;
842	Boc	*t*-Bu	3-Me	;
843	Boc	*t*-Bu	4-Me	;
844		*t*-Bu	4-OMe	;
845		*i*-Pr	--	;
846		*i*-Pr	--	;
847	Boc	cHex	--	;
848	Boc		--	;
849	Boc		--	;
850	Boc		--	;

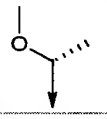
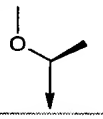
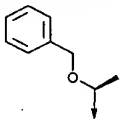
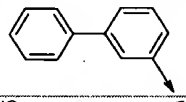
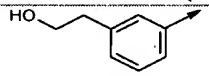
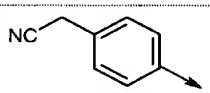
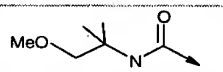
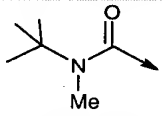
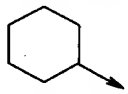
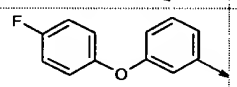
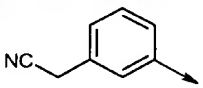
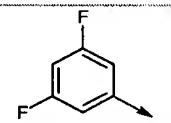
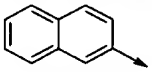
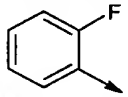
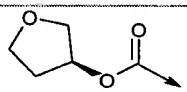
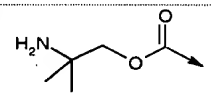
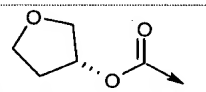
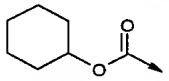
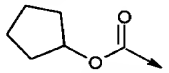
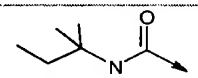
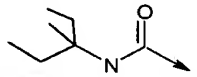
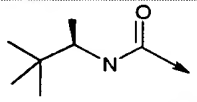
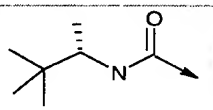
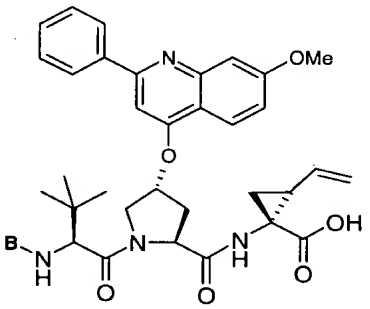
Table 8 Cpd #	B	R_3	R_{22}	
851	Boc		--	;
852	Boc		--	;
853	Boc		--	;
854		*i*-Pr	--	;
855		*i*-Pr	--	;
856		*i*-Pr	--	;
857		*t*-Bu	--	;
858		*t*-Bu	--	;
859		*i*-Pr	--	;
860		*i*-Pr	--	;
861		*i*-Pr	--	;
862		*i*-Pr	--	;
863		*i*-Pr	--	;
864		*i*-Pr	--	;
865		*t*-Bu	--	;

Table 8 Cpd #	B	R_3	R_{22}	
866		*t*-Bu	--	;
867		*t*-Bu	--	;
868		*t*-Bu	--	;
869		*t*-Bu	--	;
870		*t*-Bu	--	;
871		*t*-Bu	--	;
872		*t*-Bu	--	;
and 873		*t*-Bu	--	.

63. A compound according to claim 62, selected from the group consisting of compound #: **801 to 825, 827 to 858,** and **860 to 873.**

64. A compound according to claim 45 represented by the formula:



wherein **B** is as defined below:

Table 9 Cpd #	B	
901	Boc	;

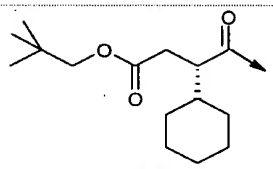
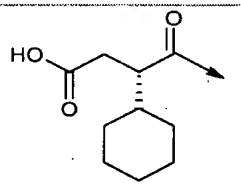
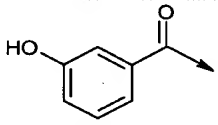
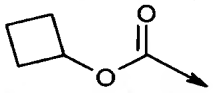
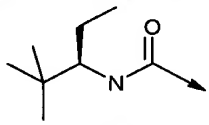
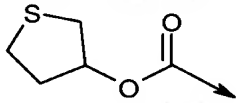
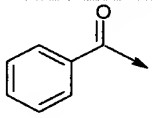
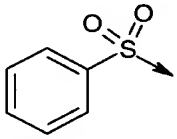
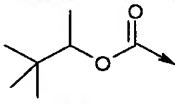
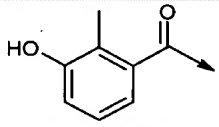
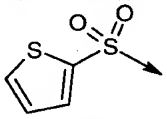
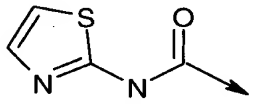
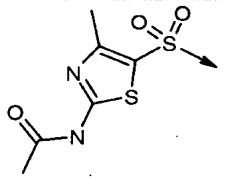
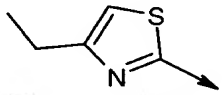
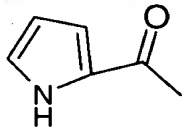
Table 9 Cpd #	B
902	 ;
903	 ;
904	 ;
905	 ;
906	 ;
907	 ;
908	 ;
909	 ;
910	 ;
911	 ;
912	 ;

Table 9 Cpd #	B
913	
914	
915	
and 916	

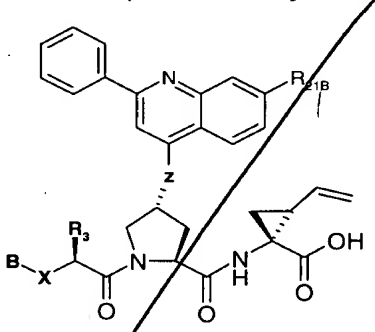
;

;

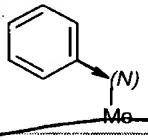
;

.

65. A compound according to claim 45 represented by the formula:



wherein **B**, **X**, R_3, **z** and R_{21B} are as defined below:

Table 10 Cpd #	B-X-	R_3	Z	R_{21B}
1001	Ph-N(Me)-	*i*-Pr	O	H;
1002	Boc-NH-	*t*-Bu	S	OMe;
and 1003		*i*-Pr	O	---.

66. A pharmaceutical composition comprising an anti-hepatitis C virally effective amount of a compound of formula I according to claim 1, or a therapeutically acceptable salt or ester thereof, in admixture with a pharmaceutically acceptable carrier medium or auxiliary agent.

67. A method of treating a hepatitis C viral infection in a mammal by administering to the mammal an anti-hepatitis C virally effective amount of the compound of formula I according to claim 1, or a therapeutically acceptable salt or ester thereof.

68. A method of treating a hepatitis C viral infection in a mammal by administering to the mammal an anti-hepatitis C virally effective amount of the composition according to claim 67.

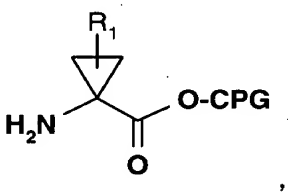
69. A method of inhibiting the replication of hepatitis C virus by exposing the virus to a hepatitis C viral NS3 protease inhibiting amount of the compound of formula I according to claim 1, or a therapeutically acceptable salt or ester thereof.

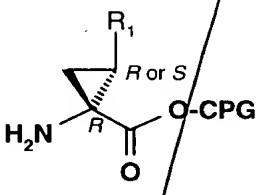
70. A method of treating a hepatitis C viral infection in a mammal by administering thereto an anti-hepatitis C virally effective amount of a combination of the compound of formula I according to claim 1, or a therapeutically acceptable salt or ester thereof with another anti-HCV agent.

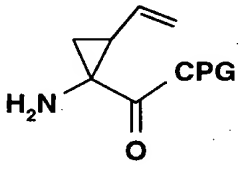
71. A method according to claim 70, wherein said other anti-HCV agent is selected from the group consisting of: α- or β-interferon, ribavirin and amantadine.

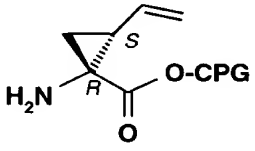
72. A method according to claim 70, wherein said other anti-HCV agent comprises an inhibitor of other targets in the HCV life cycle, selected from: helicase, polymerase, metalloprotease or IRES.

73. A process for the preparation of a peptide analog of formula (I) wherein P1 is a substituted aminocyclopropyl carboxylic acid residue, comprising the step of: coupling a peptide selected from the group consisting of: APG-P3-P2; or APG-P2; with a P1 intermediate of formula:



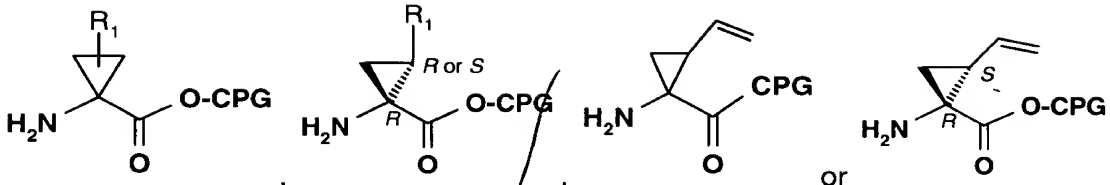
,


,


or


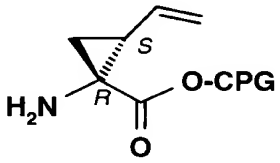
wherein $\mathbf{R_1}$ is C_{1-6} alkyl, cycloalkyl or C_{2-6} alkenyl, all optionally substituted with halogen, CPG is a carboxyl protecting group and APG is an amino protecting group and P3 and P2 are as defined above.

74. A process for the preparation of: 1)a serine protease inhibitor peptide analog, or 2) a HCV NS3 protease inhibitor peptide analog, this process comprising the step of: coupling a (suitably protected) amino acid, peptide or peptide fragment with a P1 intermediate of formula:



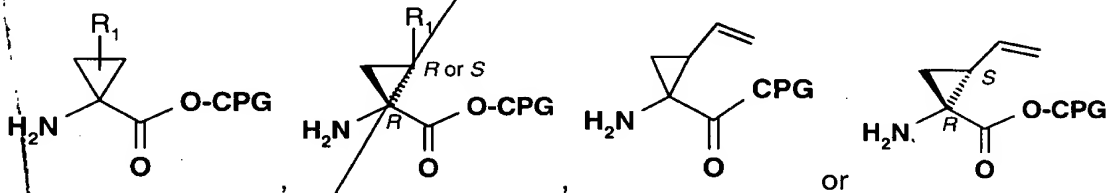
wherein $\mathbf{R_1}$ is C_{1-6} alkyl, cycloalkyl or C_{2-6} alkenyl, all optionally substituted with halogen, and CPG is a carboxyl protecting group.

75. A process for the preparation of: 1) a protease inhibitor peptide analog, or 2) a serine protease inhibitor peptide analog, this process comprising the step of: coupling a (suitably protected) amino acid, peptide or peptide fragment with an intermediate of formula:



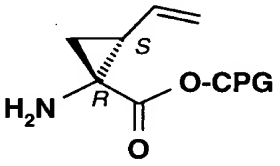
wherein CPG is a carboxyl protecting group.

76. Use of a P1 intermediate of formula:



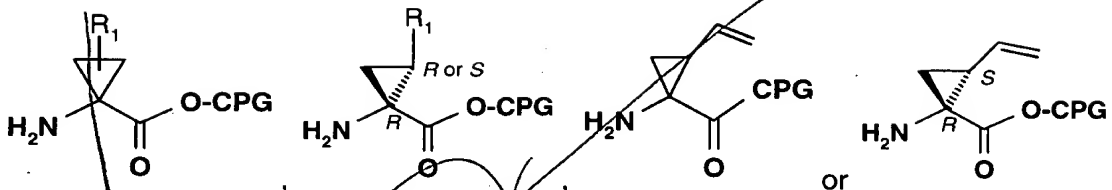
wherein $\mathbf{R_1}$ is C_{1-6} alkyl, cycloalkyl or C_{2-6} alkenyl, all optionally substituted with halogen and CPG is a carboxyl protecting group, for the preparation of: 1)a serine protease inhibitor peptide analog, or 2) a HCV NS3 protease inhibitor peptide analog.

77. Use of an intermediate of formula:



wherein CPG is a carboxyl protecting group, for the preparation of: 1) a protease inhibitor peptide analog, or 2) a serine protease inhibitor peptide analog.

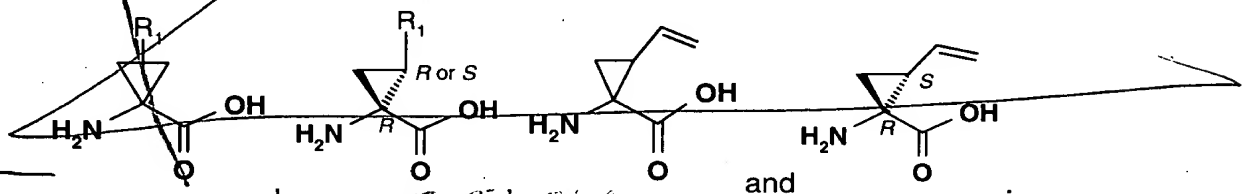
78. Use of a P1 intermediate of formula:



or

wherein R_1 is C_{1-6} alkyl, cycloalkyl or C_{2-6} alkenyl, all optionally substituted with halogen and CPG is a carboxyl protecting group, for the preparation of a compound of formula I as defined above.

79. An amino acid analog compound selected from the group consisting of:



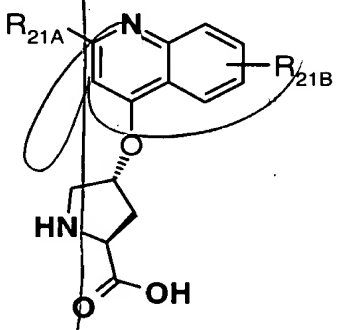
and

80. The process according to claim ~~73, 74 or 78~~ wherein said carboxyl protecting group (CPG) is selected from the group consisting of:
alkyl esters, aralkyl esters, and esters being cleavable by mild base treatment or mild reductive means.

81. A process for the resolution of enantiomers from a mixture of (*1R,2S*)/(*1S,2S*)-1-amino-2-vinylcyclopropyl carboxylic acid methyl ester, comprising the step of treating said mixture with an esterase to obtain the corresponding (1*R,2S)* enantiomer.

82. A process according to claim 81, wherein said esterase is Alcalase®.

83. Use of a proline analog of formula:



wherein R_{21A} is C_{1-6} alkyl; C_{1-6} alkoxy; lower thioalkyl; halo; amino optionally mono-substituted with C_{1-6} alkyl; C_6, C_{10} aryl, C_{7-16} aralkyl or Het, said aryl, aralkyl or Het optionally substituted with R_{22} wherein R_{22} is C_{1-6} alkyl, C_{1-6} alkoxy, amido, (lower alkyl)amide, amino optionally mono- or di-substituted with C_{1-6} alkyl, or Het; and

R_{21B} is C_{1-6} alkyl, C_{1-6} alkoxy, amino, di(lower alkyl)amino, (lower alkyl)amide, NO_2, OH, halo, trifluoromethyl, or carboxyl;

for the synthesis of 1) a serine protease inhibitor peptide analog, 2) a HCV NS3 protease inhibitor peptide analog, or 3) a peptide analog of formula I.

84. Use of an anti-hepatitis C virally effective amount of the compound of formula I according to claim 1, or a therapeutically acceptable salt or ester thereof for the preparation of a composition for treating a hepatitis C viral infection in a mammal.

85. Use of a hepatitis C viral NS3 protease inhibiting amount of the compound of formula I according to claim 1, or a therapeutically acceptable salt or ester thereof for the preparation of a composition for inhibiting the replication of hepatitis C virus.

86. Use of an anti-hepatitis C virally effective amount of a combination of the compound of formula I according to claim 1, or a therapeutically acceptable salt or ester thereof, and an interferon for the preparation of a composition for treating a hepatitis C viral infection in a mammal.